KENTUCKY RETIREMENT SYSTEMS
INVESTMENTS

To: KRS Board of Trustees

From: Richard Robben, Interim Executive Director of Investments

Date: February 21th, 2019

Subject: Report on Recent Investment Committee Activities

Investment Activity

New Investments

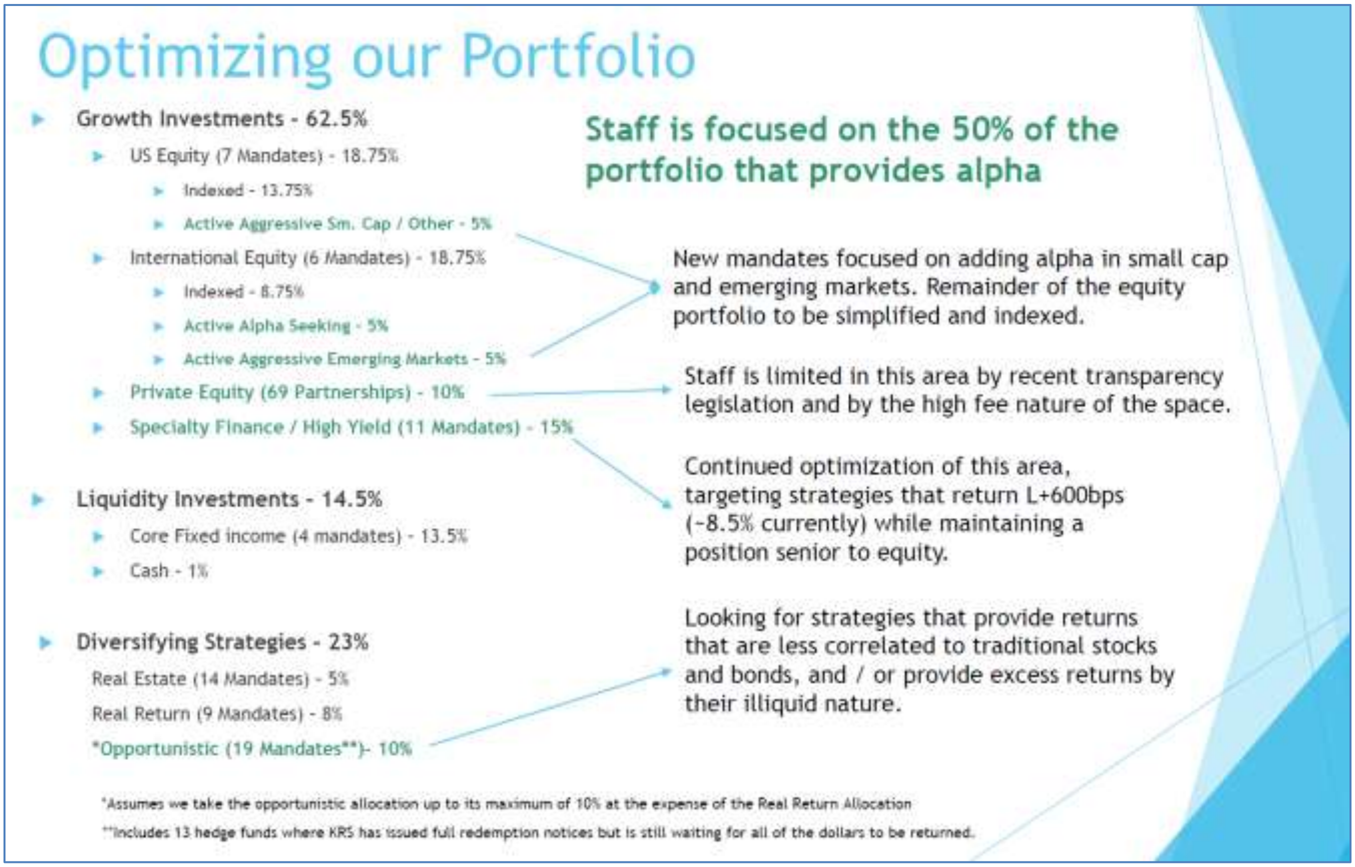
None

Staff additions & Redemptions

Waterfall Asset Management – ($5MM (Pension = $5MM / Insurance = $10MM) additional deposits made in January 2019. Staff plans to add roughly $10MM per month to our Waterfall accounts in order to increase their size to $200MM for Pension and $100MM for Insurance.

Funding the new Loomis Sayles Account – Staff wired $750mm ($550mm Pension / $200mm Insurance) to the new Loomis Sayles intermediate Agg Core Fixed Income accounts on January 10th, 2019. The source of the funds was a partial liquidation of our holdings in the BNY Intermediate Credit Index Fund.

Plans for 2019



At the February 12th meeting of the Investment Committee meeting, staff presented their work plan for 2019. Staff intends to focus their time on the areas of the portfolio that provide alpha, which is roughly 50% of our assets. The other 50% that represents beta exposure will be indexed at the lowest possible cost. New mandates are planned in US Equity Small Cap, and in the International Emerging Market Equity sectors. Staff will also continue to build out our Specialty Finance and Opportunistic allocations as suitable investments are found in those areas.

Investment Guideline Waivers

The Investment Committee granted 3 guideline waivers at the February 6th meeting and agreed to review each of these waivers at all subsequent meetings. Two of these waivers are still in effect:

1. Staff was granted a waiver of the requirement that each of our external investment managers should be visited annually on-site by KRS staff.
2. Staff was granted a waiver of the requirement to rebalance assets within the Absolute Return, Real Estate, and Fixed Income asset classes as the transition to our new asset allocation policy is ongoing.

Plan Allocations – February 2018

	KRS - PENSION FUND ALLOCATIONS									2/14/2019
Category	KERS - PEN					KERSH - PEN				
	Market Value	Actual	Target	Diff	Market Diff	Market Value	Actual	Target	Diff	Market Diff
Growth	$ 1,153,376,199	57.9%	53.50%	4.4%	$ 88,162,861	$ 415,595,211	63.9%	62.50%	1.4%	$ 8,900,470
US Equity	$ 293,591,450	14.7%	14.75%	0.0%	$ (88,863)	$ 116,422,669	17.9%	17.75%	0.1%	$ 921,362
Non-US Equity	$ 341,972,166	17.2%	16.75%	0.4%	$ 8,470,794	$ 128,573,835	19.8%	19.75%	0.0%	$ 58,297
Private Equity	$ 230,077,206	11.6%	7.00%	4.6%	$ 90,703,498	$ 64,520,701	9.9%	10.00%	-0.1%	$ (550,458)
High Yield/Specialty Credit	$ 287,735,377	14.5%	15.00%	-0.5%	$ (10,922,569)	$ 106,078,007	16.3%	15.00%	1.3%	$ 8,471,269
Liquidity	$ 527,386,201	26.5%	23.50%	3.0%	$ 59,488,753	$ 134,521,200	20.7%	14.50%	6.2%	$ 40,168,020
Core Fixed Income	$ 465,985,787	23.4%	20.50%	2.9%	$ 57,819,928	$ 109,384,088	16.8%	13.50%	3.3%	$ 21,538,023
Cash	$ 61,400,414	3.1%	3.00%	0.1%	$ 1,668,825	$ 25,137,112	3.9%	1.00%	2.9%	$ 18,629,996
Diversifying Strategies	$ 308,476,391	15.5%	23.00%	-7.5%	$ (149,465,792)	$ 99,075,388	15.2%	23.00%	-7.8%	$ (50,588,277)
Real Return	$ 159,574,001	8.0%	15.00%	-7.0%	$ (139,083,945)	$ 54,763,763	8.4%	15.00%	-6.6%	$ (42,842,975)
Real Estate	$ 76,944,468	3.9%	5.00%	-1.1%	$ (22,608,181)	$ 24,749,059	3.8%	5.00%	-1.2%	$ (7,786,520)
Abs Ret / Opportunistic	$ 71,957,923	3.6%	3.00%	0.6%	$ 12,226,334	$ 19,562,566	3.0%	3.00%	0.0%	$ 41,218
Miscellaneous	$ 1,814,178	0.1%	0.00%	0.1%	$ 1,814,178	$ 1,519,788	0.2%	0.00%	0.2%	$ 1,519,788
TOTAL PORTFOLIO	$1,991,052,968					$650,711,587				

Category	CERS - PEN					CERSH - PEN				
	Market Value	Actual	Target	Diff	Market Diff	Market Value	Actual	Target	Diff	Market Diff
Growth	$4,487,591,873	64.8%	62.50%	2.3%	$ 162,186,658	$1,500,197,061	64.7%	62.50%	2.2%	$ 50,386,210
US Equity	$1,266,745,546	18.3%	17.75%	0.6%	$ 38,330,465	$ 422,791,757	18.2%	17.75%	0.5%	$ 11,045,475
Non-US Equity	$1,401,059,051	20.2%	19.75%	0.5%	$ 34,231,003	$ 468,314,683	20.2%	19.75%	0.4%	$ 10,174,454
Private Equity	$695,516,356	10.0%	10.00%	0.0%	$ 3,451,522	$ 236,911,720	10.2%	10.00%	0.2%	$ 4,941,984
High Yield/Specialty Credit	$1,124,270,920	16.2%	15.00%	1.2%	$ 86,173,669	$ 372,178,901	16.0%	15.00%	1.0%	$ 24,224,297
Liquidity	$1,321,128,803	19.1%	14.50%	4.6%	$ 317,634,793	$450,711,190	19.4%	14.50%	4.9%	$ 114,355,073
Core Fixed Income	$1,176,725,308	17.0%	13.50%	3.5%	$ 242,437,781	$ 387,087,661	16.7%	13.50%	3.2%	$ 73,928,517
Cash	$144,403,496	2.1%	1.00%	1.1%	$ 75,197,012	$ 63,623,530	2.7%	1.00%	1.7%	$ 40,426,556
Diversifying Strategies	$1,110,467,997	16.0%	23.00%	-7.0%	$ (481,281,123)	$ 367,032,037	15.8%	23.00%	-7.2%	$ (166,498,357)
Real Return	$605,337,817	8.7%	15.00%	-6.3%	$ (432,759,435)	$ 206,498,510	8.9%	15.00%	-6.1%	$ (141,456,094)
Real Estate	$276,265,284	4.0%	5.00%	-1.0%	$ (69,767,133)	$ 87,278,883	3.8%	5.00%	-1.2%	$ (28,705,985)
Abs Ret / Opportunistic	$228,864,895	3.3%	3.00%	0.3%	$ 21,245,445	$ 73,254,643	3.2%	3.00%	0.2%	$ 3,663,722
Miscellaneous	$1,459,671	0.0%	0.00%	0.0%	$ 1,459,671	$ 1,757,074	0.1%	0.00%	0.1%	$ 1,757,074
TOTAL PORTFOLIO	$6,920,648,344					$2,319,697,362				

Category	SPRS - PEN					PENSION TOTAL FUND				
	Market Value	Actual	Target	Diff	Market Diff	Market Value	Actual	Target	Diff	Market Diff
Growth	$148,444,851	56.7%	53.50%	3.2%	$ 8,279,889	$ 7,705,205,196	63.4%	60.8%	2.6%	$ 317,916,087
US Equity	$ 40,229,349	15.4%	14.75%	0.6%	$ 1,585,738	$ 2,139,780,770	17.6%	17.2%	0.4%	$ 51,794,176
Non-US Equity	$ 45,172,427	17.2%	16.75%	0.5%	$ 1,289,004	$ 2,385,092,162	19.6%	19.2%	0.4%	$ 54,223,552
Private Equity	$ 21,151,390	8.1%	7.00%	1.1%	$ 2,812,049	$ 1,248,177,374	10.3%	9.4%	0.8%	$ 101,358,596
High Yield/Specialty Credit	$ 41,891,686	16.0%	15.00%	1.0%	$ 2,593,098	$ 1,932,154,891	15.9%	15.0%	0.9%	$ 110,539,764
Liquidity	$73,075,679	27.9%	23.50%	4.4%	$ 11,507,892	$ 2,506,823,073	20.6%	16.2%	4.5%	$ 543,154,531
Core Fixed Income	$ 63,473,147	24.2%	20.50%	3.7%	$ 9,765,078	$ 2,202,655,990	18.1%	14.8%	3.3%	$ 405,489,328
Cash	$ 9,602,532	3.7%	3.00%	0.7%	$ 1,742,814	$ 304,167,083	2.5%	1.4%	1.1%	$ 137,665,203
Diversifying Strategies	$ 40,113,434	15.3%	23.00%	-7.7%	$ (20,144,400)	$ 1,925,165,246	15.9%	23.0%	-7.1%	$ (867,977,948)
Real Return	$ 21,774,257	8.3%	15.00%	-6.7%	$ (17,524,331)	$ 1,047,948,347	8.6%	15.0%	-6.4%	$ (773,666,779)
Real Estate	$ 10,474,489	4.0%	5.00%	-1.0%	$ (2,625,041)	$ 475,712,183	3.9%	5.0%	-1.1%	$ (131,492,859)
Abs Ret / Opportunistic	$ 7,864,689	3.0%	3.00%	0.0%	$ 4,971	$ 401,504,716	3.3%	3.0%	0.3%	$ 37,181,690
Miscellaneous	$ 356,619	0.1%	0.00%	0.1%	$ 356,619	$ 6,907,330	0.1%	0.0%	0.1%	$ 6,907,330
TOTAL PORTFOLIO	$261,990,584					$12,144,100,845				

KRS - INSURANCE FUND ALLOCATIONS 2/14/2019

Category	KERS - INS Market Value	Actual	Target	Diff	Market Diff
Growth	**$ 560,418,156**	**64.7%**	**62.50%**	**2.2%**	**$ 18,891,861**
US Equity	$ 174,351,238	20.1%	17.75%	2.4%	$ 20,557,770
Non-US Equity	$ 189,032,808	21.8%	19.75%	2.1%	$ 17,910,499
Private Equity	$ 47,666,228	5.5%	10.00%	-4.5%	$ (38,977,979)
High Yield/Specialty Credit	$ 149,367,882	17.2%	15.00%	2.2%	$ 19,401,571
Liquidity	**$ 177,371,251**	**20.5%**	**14.50%**	**6.0%**	**$ 51,737,151**
Core Fixed Income	$ 132,573,163	15.3%	13.50%	1.8%	$ 15,603,483
Cash	$ 44,798,088	5.2%	1.00%	4.2%	$ 36,133,667
Diversifying Strategies	**$ 128,696,479**	**14.9%**	**23.00%**	**-8.1%**	**$ (70,585,198)**
Real Return	$ 72,190,469	8.3%	15.00%	-6.7%	$ (57,775,842)
Real Estate	$ 28,823,547	3.3%	5.00%	-1.7%	$ (14,498,557)
Abs Ret / Opportunistic	$ 27,682,463	3.2%	3.00%	0.2%	$ 1,689,201
Miscellaneous	$ (43,814)	0.0%	0.00%	0.0%	$ (43,814)
TOTAL PORTFOLIO	**$ 866,442,072**				

Category	KERSH - INS Market Value	Actual	Target	Diff	Market Diff
Growth	**$ 331,550,986**	**65.1%**	**62.50%**	**2.6%**	**$ 13,118,283**
US Equity	$ 93,617,111	18.4%	17.75%	0.6%	$ 3,182,224
Non-US Equity	$ 104,837,935	20.6%	19.75%	0.8%	$ 4,213,201
Private Equity	$ 52,625,660	10.3%	10.00%	0.3%	$ 1,676,428
High Yield/Specialty Credit	$ 80,470,279	15.8%	15.00%	0.8%	$ 4,046,430
Liquidity	**$ 96,125,318**	**18.9%**	**14.50%**	**4.4%**	**$ 22,248,931**
Core Fixed Income	$ 82,498,660	16.2%	13.50%	2.7%	$ 13,717,197
Cash	$ 13,626,658	2.7%	1.00%	1.7%	$ 8,531,734
Diversifying Strategies	**$ 81,842,132**	**16.1%**	**23.00%**	**-6.9%**	**$ (35,341,103)**
Real Return	$ 42,655,019	8.4%	15.00%	-6.6%	$ (33,768,830)
Real Estate	$ 21,141,071	4.1%	5.00%	-0.9%	$ (4,333,546)
Abs Ret / Opportunistic	$ 18,046,042	3.5%	3.00%	0.5%	$ 2,761,272
Miscellaneous	$ (26,111)	0.0%	0.00%	0.0%	$ (26,111)
TOTAL PORTFOLIO	**$ 509,492,325**				
					$ 13,118,283

Category	CERS - INS Market Value	Actual	Target	Diff	Market Diff
Growth	**$1,536,734,449**	**64.8%**	**62.50%**	**2.3%**	**$ 54,889,465**
US Equity	$ 425,890,017	18.0%	17.75%	0.2%	$ 5,046,042
Non-US Equity	$ 476,788,087	20.1%	19.75%	0.4%	$ 8,525,072
Private Equity	$ 283,511,606	12.0%	10.00%	2.0%	$ 46,416,408
High Yield/Specialty Credit	$ 350,544,740	14.8%	15.00%	-0.2%	$ (5,098,057)
Liquidity	**$459,168,624**	**19.4%**	**14.50%**	**4.9%**	**$ 115,380,587**
Core Fixed Income	$ 370,188,724	15.6%	13.50%	2.1%	$ 50,110,207
Cash	$ 88,979,900	3.8%	1.00%	2.8%	$ 65,270,380
Diversifying Strategies	**$ 375,169,589**	**15.8%**	**23.00%**	**-7.2%**	**$ (170,149,366)**
Real Return	$ 205,169,463	8.7%	15.00%	-6.3%	$ (150,473,333)
Real Estate	$ 91,747,523	3.9%	5.00%	-1.1%	$ (26,800,075)
Abs Ret / Opportunistic	$ 78,252,602	3.3%	3.00%	0.3%	$ 7,124,043
Miscellaneous	$ (120,687)	0.0%	0.00%	0.0%	$ (120,687)
TOTAL PORTFOLIO	**$ 2,370,951,975**				

Category	CERSH - INS Market Value	Actual	Target	Diff	Market Diff
Growth	**$834,564,719**	**65.5%**	**62.50%**	**3.0%**	**$ 38,376,261**
US Equity	$ 230,749,217	18.1%	17.75%	0.4%	$ 4,631,695
Non-US Equity	$ 258,392,307	20.3%	19.75%	0.5%	$ 6,796,754
Private Equity	$ 159,382,319	12.5%	10.00%	2.5%	$ 31,992,166
High Yield/Specialty Credit	$ 186,040,875	14.6%	15.00%	-0.4%	$ (5,044,354)
Liquidity	**$239,022,939**	**18.8%**	**14.50%**	**4.3%**	**$ 54,307,217**
Core Fixed Income	$ 198,347,833	15.6%	13.50%	2.1%	$ 26,371,127
Cash	$ 40,675,105	3.2%	1.00%	2.2%	$ 27,936,090
Diversifying Strategies	**$ 200,378,856**	**15.7%**	**23.00%**	**-7.3%**	**$ (92,618,496)**
Real Return	$ 106,640,630	8.4%	15.00%	-6.6%	$ (84,444,600)
Real Estate	$ 50,238,876	3.9%	5.00%	-1.1%	$ (13,456,201)
Abs Ret / Opportunistic	$ 43,499,350	3.4%	3.00%	0.4%	$ 5,282,304
Miscellaneous	$ (64,982)	0.0%	0.00%	0.0%	$ (64,982)
TOTAL PORTFOLIO	**$ 1,273,901,531**				

Category	SPRS - INS Market Value	Actual	Target	Diff	Market Diff
Growth	**$126,903,053**	**66.6%**	**62.50%**	**4.1%**	**$ 7,781,555**
US Equity	$ 35,221,458	18.5%	17.75%	0.7%	$ 1,390,953
Non-US Equity	$ 38,997,178	20.5%	19.75%	0.7%	$ 1,354,784
Private Equity	$ 24,176,308	12.7%	10.00%	2.7%	$ 5,116,868
High Yield/Specialty Credit	$ 28,508,110	15.0%	15.00%	0.0%	$ (81,050)
Liquidity	**$34,130,199**	**17.9%**	**14.50%**	**3.4%**	**$ 6,494,012**
Core Fixed Income	$ 29,538,170	15.5%	13.50%	2.0%	$ 3,807,926
Cash	$ 4,592,029	2.4%	1.00%	1.4%	$ 2,686,085
Diversifying Strategies	**$ 29,570,898**	**15.5%**	**23.00%**	**-7.5%**	**$ (14,265,814)**
Real Return	$ 14,761,666	7.7%	15.00%	-7.3%	$ (13,827,494)
Real Estate	$ 8,070,125	4.2%	5.00%	-0.8%	$ (1,459,595)
Abs Ret / Opportunistic	$ 6,739,107	3.5%	3.00%	0.5%	$ 1,021,275
Miscellaneous	$ (9,752)	0.0%	0.00%	0.0%	$ (9,752)
TOTAL PORTFOLIO	**$ 190,594,398**				

Category	INSURANCE TOTAL FUND Market Value	Actual	Target	Diff	Market Diff
Growth	**$ 3,390,171,363**	**65.1%**	**62.5%**	**2.6%**	**$ 133,057,425**
US Equity	$ 959,829,042	18.4%	17.75%	0.7%	$ 34,808,684
Non-US Equity	$ 1,068,048,315	20.5%	19.75%	0.7%	$ 38,800,310
Private Equity	$ 567,362,121	10.9%	10.0%	0.9%	$ 46,223,891
High Yield/Specialty Credit	$ 794,931,886	15.3%	15.0%	0.3%	$ 13,224,541
Liquidity	**$ 1,005,818,331**	**19.3%**	**14.5%**	**4.8%**	**$ 250,167,897**
Core Fixed Income	$ 813,146,550	15.6%	13.5%	2.1%	$ 109,609,940
Cash	$ 192,671,780	3.7%	1.0%	2.7%	$ 140,557,957
Diversifying Strategies	**$ 815,657,953**	**15.7%**	**23.0%**	**-7.3%**	**$ (382,959,976)**
Real Return	$ 441,417,246	8.5%	15.0%	-6.5%	$ (340,290,099)
Real Estate	$ 200,021,142	3.8%	5.0%	-1.2%	$ (60,547,973)
Abs Ret / Opportunistic	$ 174,219,564	3.3%	3.0%	0.3%	$ 17,878,095
Miscellaneous	$ (265,345)	0.0%	0.0%	0.0%	$ (265,345)
TOTAL PORTFOLIO	**$ 5,211,382,301**				

Performance: PENSION (Net of Fees)					
	Dec-18	FYTD	1Yr	3Yr	5Yr
Total Pension Fund	**-2.25%**	**-2.99%**	**-1.82%**	**7.00%**	**5.19%**
Allocation Index	-2.33%	-3.33%	-2.81%	6.64%	5.16%
Value Add	**0.08%**	**0.34%**	**0.99%**	**0.36%**	**0.03%**
IPS Benchmark	-2.42%	-3.26%	-2.51%		
Value Add	**0.17%**	**0.27%**	**0.69%**		
KERS	**-1.62%**	**-1.95%**	**-1.01%**	**6.31%**	**5.08%**
Allocation Index	-2.00%	-2.77%	-2.23%	6.31%	4.93%
Value Add	**0.38%**	**0.82%**	**1.22%**	**0.00%**	**0.15%**
IPS Benchmark	-2.01%	-2.91%	-2.24%		
Value Add	**0.39%**	**0.96%**	**1.23%**		
Assumed Rate of Return	0.43%	2.59%	5.25%		
Value Add	**-2.05%**	**-4.54%**	**-6.26%**		
KERS-HAZ	**-2.35%**	**-3.15%**	**-2.00%**	**7.07%**	**5.19%**
Allocation Index	-2.40%	-3.43%	-2.90%	6.75%	5.04%
Value Add	**0.05%**	**0.28%**	**0.90%**	**0.32%**	**0.15%**
IPS Benchmark	-2.28%	-2.76%	-1.99%		
Value Add	**-0.07%**	**-0.39%**	**-0.01%**		
Assumed Rate of Return	0.51%	3.08%	6.25%		
Value Add	**-2.86%**	**-6.23%**	**-8.25%**		
CERS	**-2.40%**	**-3.26%**	**-2.08%**	**7.13%**	**5.18%**
Allocation Index	-2.40%	-3.43%	-2.90%	6.78%	5.03%
Value Add	**0.00%**	**0.17%**	**0.82%**	**0.35%**	**0.15%**
IPS Benchmark	-2.28%	-2.76%	-1.99%		
Value Add	**-0.12%**	**-0.50%**	**-0.09%**		
Assumed Rate of Return	0.51%	3.08%	6.25%		
Value Add	**-2.91%**	**-6.34%**	**-8.33%**		
CERS-HAZ	**-2.39%**	**-3.24%**	**-2.03%**	**7.14%**	**5.21%**
Allocation Index	-2.40%	-3.43%	-2.90%	6.77%	5.03%
Value Add	**0.01%**	**0.19%**	**0.87%**	**0.37%**	**0.18%**
IPS Benchmark	-2.28%	-2.76%	-1.99%		
Value Add	**-0.11%**	**-0.48%**	**-0.04%**		
Assumed Rate of Return	0.51%	3.08%	6.25%		
Value Add	**-2.90%**	**-6.32%**	**-8.28%**		
SPRS	**-1.91%**	**-2.50%**	**-1.62%**	**6.35%**	**4.69%**
Allocation Index	-2.00%	-2.88%	-2.39%	6.52%	4.88%
Value Add	**0.09%**	**0.38%**	**0.77%**	**-0.17%**	**-0.19%**
IPS Benchmark	-2.09%	-2.91%	-2.24%		
Value Add	**0.18%**	**0.41%**	**0.62%**		
Assumed Rate of Return	0.43%	2.59%	5.25%		
Value Add	**-2.34%**	**-5.09%**	**-6.87%**		

Performance: INSURANCE (Net of Fees)					
	Dec-18	FYTD	1Yr	3Yr	5Yr
Total Insurance Fund	**-2.42%**	**-3.23%**	**-1.84%**	**7.28%**	**5.20%**
Allocation Index	-2.45%	-3.54%	-2.74%	6.90%	5.43%
Value Add	**0.03%**	**0.31%**	**0.90%**	**0.38%**	**-0.23%**
IPS Benchmark	**-2.38%**	**-2.96%**	**-1.89%**		
Value Add	**-0.04%**	**-0.27%**	**0.05%**		
KERS-INS	**-2.93%**	**-4.06%**	**-3.30%**	**6.57%**	**4.63%**
Allocation Index	-2.37%	-3.38%	-2.69%	7.02%	5.18%
Value Add	**-0.56%**	**-0.68%**	**-0.61%**	**-0.45%**	**-0.55%**
IPS Benchmark	**-2.55%**	**-3.44%**	-2.38%		
Value Add	**-0.38%**	**-0.62%**	**-0.92%**		
Assumed Rate of Return	**0.51%**	**3.08%**	6.25%		
Value Add	**-3.44%**	**-7.14%**	**-9.55%**		
KERSH-INS	**-2.42%**	**-3.26%**	**-1.97%**	**7.20%**	**5.13%**
Allocation Index	-2.21%	-3.17%	-2.34%	7.11%	5.29%
Value Add	**-0.21%**	**-0.09%**	**0.37%**	**0.09%**	**-0.16%**
IPS Benchmark	**-2.38%**	**-2.96%**	**-1.89%**		
Value Add	**-0.04%**	**-0.30%**	**-0.08%**		
Assumed Rate of Return	**0.51%**	**3.08%**	**6.25%**		
Value Add	**-2.93%**	**-6.34%**	**-8.22%**		
CERS-INS	**-2.32%**	**-3.10%**	**-1.60%**	**7.38%**	**5.29%**
Allocation Index	-2.45%	-3.53%	-2.71%	6.96%	5.24%
Value Add	**0.13%**	**0.43%**	**1.11%**	**0.42%**	**0.05%**
IPS Benchmark	**-2.38%**	**-2.96%**	**-1.89%**		
Value Add	**0.06%**	**-0.14%**	**0.29%**		
Assumed Rate of Return	**0.51%**	**3.08%**	**6.25%**		
Value Add	**-2.83%**	**-6.18%**	**-7.85%**		
CERSH-INS	**-2.30%**	**-3.06%**	**-1.51%**	**7.46%**	**5.35%**
Allocation Index	-2.45%	-3.53%	-2.71%	6.96%	5.24%
Value Add	**0.15%**	**0.47%**	**1.20%**	**0.50%**	**0.11%**
IPS Benchmark	**-2.38%**	**-2.96%**	**-1.89%**		
Value Add	**0.08%**	**-0.10%**	**0.38%**		
Assumed Rate of Return	**0.51%**	**3.08%**	**6.25%**		
Value Add	**-2.81%**	**-6.14%**	**-7.76%**		
SPRS-INS	**-2.30%**	**-3.07%**	**-1.52%**	**7.44%**	**5.33%**
Allocation Index	-2.45%	-3.53%	-2.71%	6.96%	5.25%
Value Add	**0.15%**	**0.46%**	**1.19%**	**0.48%**	**0.08%**
IPS Benchmark	**-2.38%**	**-2.96%**	**-1.89%**		
Value Add	**0.08%**	**-0.11%**	**0.37%**		
Assumed Rate of Return	**0.51%**	**3.08%**	**6.25%**		
Value Add	**-2.81%**	**-6.15%**	**-7.77%**		
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